

**Environmental Protection Agency**

**Pt. 98, Subpt. F, Table F-1**

the last date when the smelter-specific-slope coefficients (or overvoltage emission factors) were measured.

(d) Method used to measure the frequency and duration of anode effects (or overvoltage).

(e) The following CO<sub>2</sub>-specific information for prebake cells:

(1) Annual anode consumption.

(2) Annual CO<sub>2</sub> emissions from the smelter.

(f) The following CO<sub>2</sub>-specific information for Sderberg cells:

(1) Annual paste consumption.

(2) Annual CO<sub>2</sub> emissions from the smelter.

(g) Smelter-specific inputs to the CO<sub>2</sub> process equations (e.g., levels of sulfur and ash) that were used in the calculation, on an annual basis.

(h) Exact data elements required will vary depending on smelter technology (e.g., point-feed prebake or Sderberg) and process control technology (e.g., Pechiney or other).

**§ 98.67 Records that must be retained.**

In addition to the information required by § 98.3(g), you must retain the following records:

(a) Monthly aluminum production in metric tons.

(b) Type of smelter technology used.

(c) The following PFC-specific information on a monthly basis:

(1) Perfluoromethane and perfluoroethane emissions from anode effects in prebake and Sderberg electrolysis cells.

(2) Anode effect minutes per cell-day (AE-mins/cell-day), anode effect frequency (AE/cell-day), anode effect duration (minutes). (Or anode effect overvoltage factor ((kg CF<sub>4</sub>/metric ton Al)/(mV/cell day)), potline overvoltage (mV/cell day), current efficiency (%).))

(3) Smelter-specific slope coefficients and the last date when the smelter-specific-slope coefficients were measured.

(d) Method used to measure the frequency and duration of anode effects (or to measure anode effect overvoltage and current efficiency).

(e) The following CO<sub>2</sub>-specific information for prebake cells:

(1) Annual anode consumption.

(2) Annual CO<sub>2</sub> emissions from the smelter.

(f) The following CO<sub>2</sub>-specific information for Sderberg cells:

(1) Annual paste consumption.

(2) Annual CO<sub>2</sub> emissions from the smelter.

(g) Smelter-specific inputs to the CO<sub>2</sub> process equations (e.g., levels of sulfur and ash) that were used in the calculation, on an annual basis.

(h) Exact data elements required will vary depending on smelter technology (e.g., point-feed prebake or Sderberg) and process control technology (e.g., Pechiney or other).

**§ 98.68 Definitions.**

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part.

**TABLE F-1 TO SUBPART F OF PART 98—SLOPE AND OVERVOLTAGE COEFFICIENTS FOR THE CALCULATION OF PFC EMISSIONS FROM ALUMINUM PRODUCTION**

Technology	CF <sub>4</sub> slope coefficient [(kg CF <sub>4</sub> /metric ton Al)/(AE-Mins/cell-day)]	CF <sub>4</sub> over-voltage coefficient [(kg CF <sub>4</sub> /metric ton Al)/(mV)]	Weight fraction C <sub>2</sub> F <sub>6</sub> /CF <sub>4</sub> [(kg C <sub>2</sub> F <sub>6</sub> /kg CF <sub>4</sub> )]
CWPB .....	0.143	1.16	0.121
SWPB .....	0.272	3.65	0.252
VSS .....	0.092	NA	0.053
HSS .....	0.099	NA	0.085

TABLE F-2 TO SUBPART F OF PART 98—DEFAULT DATA SOURCES FOR PARAMETERS USED FOR CO<sub>2</sub> EMISSIONS

Parameter	Data source
<b>CO<sub>2</sub> Emissions from Prebake Cells (CWPB and SWPB)</b>	
MP: metal production (metric tons Al) .....	Individual facility records.
NAC: net annual prebaked anode consumption per metric ton Al (metric tons C/metric tons Al) .....	Individual facility records.
S <sub>a</sub> : sulfur content in baked anode (percent weight) .....	2.0.
Ash <sub>a</sub> : ash content in baked anode (percent weight) .....	0.4.
<b>CO<sub>2</sub> Emissions from Sderberg Cells (VSS and HSS)</b>	
MP: metal production (metric tons Al) .....	Individual facility records.
PC: annual paste consumption (metric ton/metric ton Al) .....	Individual facility records.
CSM: annual emissions of cyclohexane soluble matter (kg/metric ton Al) .....	HSS: 4.0. VSS: 0.5.
BC: binder content of paste (percent weight) .....	Dry Paste: 24. Wet Paste: 27.
S <sub>p</sub> : sulfur content of pitch (percent weight) .....	0.6.
Ash <sub>p</sub> : ash content of pitch (percent weight) .....	0.2.
H <sub>p</sub> : hydrogen content of pitch (percent weight) .....	3.3.
S <sub>c</sub> : sulfur content in calcined coke (percent weight) .....	1.9.
Ash <sub>c</sub> : ash content in calcined coke (percent weight) .....	0.2.
CD: carbon in skimmed dust from Sderberg cells (metric ton C/metric ton Al) .....	0.01.
<b>CO<sub>2</sub> Emissions from Pitch Volatiles Combustion (VSS and HSS)</b>	
GA: initial weight of green anodes (metric tons) .....	Individual facility records.
H <sub>a</sub> : annual hydrogen content in green anodes (metric tons) .....	0.005 × GA.
BA: annual baked anode production (metric tons) .....	Individual facility records.
WT: annual waste tar collected (metric tons) .....	(a) 0.005 × GA. (b) insignificant.
(a) Riedhammer furnaces .....	
(b) all other furnaces .....	
<b>CO<sub>2</sub> Emissions From Bake Furnace Packing Materials (CWPB and SWPB)</b>	
PCC: annual packing coke consumption (metric tons/metric ton baked anode) .....	0.015.
BA: annual baked anode production (metric tons) .....	Individual facility records.
S <sub>pc</sub> : sulfur content in packing coke (percent weight) .....	2.
Ash <sub>pc</sub> : ash content in packing coke (percent weight) .....	2.5.

## Subpart G—Ammonia Manufacturing

### § 98.70 Definition of source category.

The ammonia manufacturing source category comprises the process units listed in paragraphs (a) and (b) of this section.

(a) Ammonia manufacturing processes in which ammonia is manufactured from a fossil-based feedstock produced via steam reforming of a hydrocarbon.

(b) Ammonia manufacturing processes in which ammonia is manufactured through the gasification of solid and liquid raw material.

### § 98.71 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains an ammonia manufacturing proc-

ess and the facility meets the requirements of either § 98.2(a)(1) or (2).

### § 98.72 GHGs to report.

You must report:

(a) CO<sub>2</sub> process emissions from steam reforming of a hydrocarbon or the gasification of solid and liquid raw material, reported for each ammonia manufacturing process unit following the requirements in this subpart.

(b) CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions from each stationary fuel combustion unit. You must report these emissions under subpart C of this part (General Stationary Fuel Combustion Sources), by following the requirements of subpart C.

(c) CO<sub>2</sub> emissions collected and transferred off site under subpart PP of this part (Suppliers of CO<sub>2</sub>), following the requirements of subpart PP.